

REMARKS

The restriction requirement was withdrawn, and a single novelty rejection over US Patent No. 6,251,048 to Kaufman has been applied to all of the claims 1-29. The withdrawal of the restriction requirement is appreciated. The novelty rejection is traversed on the basis of amended claims.

Like the invention, Kaufman discloses an electronic exercise monitor that provides verbal feedback relating to monitored conditions. The verbal feedback can provide informational speech about the monitored conditions or motivational speech indicating an exercise performance level. All of the sound data output by Kaufman's device is produced by a speech generator controlled by a processor.

An improvement disclosed for the subject invention and now more clearly featured in the claims supplements verbal feedback with musical feedback. Together, the verbal feedback and musical feedback provide a more appropriately matched and stable form of motivation. The musical feedback can be controlled in various ways including selecting faster or slower titles. The outputted beat of the music can be, for example, pulse controlled or running controlled.

The output of verbal information alone can produce overreactions by the user. For example, supplying current pulse information to a user can cause users to change exercise speeds too abruptly. For example, in response to a verbal feedback of a low pulse rate, a user may abruptly increase exercise speed and well overshoot a target pulse rate. The same user may be encouraged to abruptly decrease exercise speed in response to further verbal feedback about the overshoot pulse rate. The addition of musical feedback tends to dampen overreactions and to keep exercise within optimum bounds. The verbal feedback information and motivational speech are still very useful for controlling exercise, but their effects in the presence of music are more gradual.

All four independent claims 1, 7, 21, and 23 have been amended to provide for the output of both music and verbal training information. For example, the method of optimizing training set forth in claim 1 now explicitly requires "outputting music and verbal training information to

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the user by a portable sound playback device." The portable training device of claim 7, the training system of claim 21, and the system for regulating physical activity of claim 23 all now explicitly require "a sound playback device adapted for playback of music."

Support for these additions are found throughout the specification. For example, on page 4, lines 23-24, the previously identified music is said to be "modified for example by selecting a faster/slower title." In the succeeding paragraph spanning lines 25-32, a music playback means is described as "a means for outputting a beat, so that the user is given a predetermined selectable rhythm according to that the user can perform his training." The passage also states that the "beat can preferably be provided variably to influence the training course and the training speed" and that the music played by the music playback means can be for example "pulse controlled or running controlled." In addition, the portable training device illustrated in FIG. 2 and described in the sole paragraph of page 7 includes output sub-units for both music and voice.


The sound output of Kaufman's device is limited to the output of verbal information produced by a speech generator, and no reference is made to the output of music. Kaufman concentrates on the output of verbal information by means of the speech generator and does not take into consideration that the combination of music with verbal information enhances and optimizes exercise training. Absent any recognition of the benefits, no motivation is available to Kaufman to lead Kaufman to make the modifications required to reach the claimed invention. Thus, the invention is distinguished over Kaufman not only on the basis of novelty but also on the basis of non-obviousness, since the art provides Kaufman with no expectation that the addition of music to the output verbal information would further optimize exercise training.

In view of the above amendments and remarks, all of the claims are now believed to be in condition for allowance. Reconsideration and allowance of all pending claims 1-29 are respectfully requested.

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For any question on these amendments or remarks, the Examiner is invited to call applicants' representative at the number listed below.

Respectfully submitted,
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Enclosures

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